l	2	3	4
28.	Multifunction Digital De modulator and Bit-Synchroniser	Yes	Yes
29.	Multifunction Simulator	No	Ye*
30.	Texturemeter	No	*Yes*
31.	Laser Range Finder	No	Yes
32.	Auto Focus Enlarger	No	Yes

(d) The names of products which are under development and to be commercialised are the following:—

1. UNIX Based Quick Look Browsing System
2. Pattern recognition and image enhancement software
3. Micro-MIDAS (Mk-II)
4. Frame Synchroniser

These technologies being still under development, the tentative project cost and expected demand are not available.

Technologies Developed by ISRO

4863. SHRI G.Y. KRISHNAN: Will the PRIME MINISTER be pleased to state:

(a) whether it is a fact that Indian Space Research Organisation, Bangalore and its branches have developed technologies for various products for its captive consumption as well as genera! use; if so, what are the details thereof; and

(b) what are the names of the products, serial-wise for which technologies are yet to be transferred to the entrepreneurs by ISRO, their tentative annual requirements, unit price (Appro.); project cost and details of buy back guarantee by ISRO and other agencies?

THE MINISTER OF STATE IN THE PRIME MINISTERS OFFICE AND MINISTER OF STATE IN THE DEPARTMENTS OF AUTOMIC ENERGY AND SPACE AND MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI BHUVNESH CHATURVEDI): (a) Yes, Sir. So far, Indian Space Research Organisation has developed and transferred to industries 224 technologies of these eight technologies covered products, which required buyback from ISRO. Further, 88 technologies related to space related applications, for which products are bought by various user Ministries and agencies outside ISRO. These indude items like telecommunication ground systems, disaster warning receiver system and remote sensing data interpretaties equipment. Rest of! 128 technologies transferred belonged to products of general use.

(c) Several technology developments in ISRO are being follwed up in fields like chemicals, electronics,: electromechanical, telecommunications and optical fields for adaptations to general use. However, none of these items are assessed to be required primarily foe ISRO's buyback. Hence the annual requirements, unit price and project cost are decided by agencies marketing ; such products Normally such data could be worked out when the technology is mature for transfer and often in conjunction with industries acquiring technologies.

Supply of Cryogenic Booster Engines to India

4864. SHRI V. NARAYANASAMY: Will the PRIME MINISTER be pleased to state:

(a) whether any discussion was h;H recently between the team of

Indian Scientists and their counterparts in Russia in regard to $ 350 million Indo-Rus&ian deal in regard to the supply of Cryogenic booster engines free of cost to India; and

(b) if to, when the same are likely to be supplied?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE AND MINISTER OF STATE IN THE DEPARTMENTS OF ATOMIC ENERGY AND SPACE AND MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI BHUVNESH CHATURVEDI): (a) and (b) The original agreement with Glavkosmos, Russia entered into in January 1991 for the supply of two flight stages, technology transfer and training for a sum of Rs. 235 crores was modified in March 1994 into a supply contract. Under this contract, in addition to the originally mvisaged two cryo stages including engines, two more cryo stages including engines and two models (Technological model and propellant filling model) are to be supplied as compensation for the deletion of technology transfer and training, the amount remaining the same (i.e.) Rs. 235 crores, periodic meetings *on* the project progress have been taking place between ISRO and Glavkosmos teams. The first cryo stage is expected to be delivered by last quarter of 1996 There is no supply of cryo stages free of cost.

Purchase of Cryogenic Engine Blocks by ISRO

4865. SHRI SURESH KALMADI: Will the PRIME MINISTER be pleased to state:

(a) whether it is a fact that the Indian Space Research Organisation (ISRO)has decided to buy three additional Cryoganic engine blocks from Russia; and

(b) if so, the details thereof and what is the total cost involved in the proposed purchase?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE AND MINISTER OF STATE IN THE DEPARTMENTS OF ATOMIC ENERGY AND SPACE AND MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI BHUVNESH CHATURVEDI): (a) and (b) Yes, Sir. making use of the provision in the original contract of 1991, ISRO has exercised the option of ordering 3 more cryogenic statges, including engines, from Russia at the same unit price of $ 3 million. These additional stages are expected to be delivered in 4th Quarter of 1998, 2nd Quarter of 1999 and 4th Quarter of 1999 respectively '

12.00 NOON

(The Deputy Chairman *in the Chair)*

PAPERS LAID ON THE TABLE

Notifications of Ministry of Industry

THE MINISTER OF STATE IN THE MINISTRY OF INDUSTRY (DEPTT. OF INDUSTRIAL DEVELOPMENT) (SHRIMATI KRISHNA SAHI): Madam, I lay on the Table a copy each (in English and Hindi) of the following Notifications of the Ministry of Industry (Department of Industrial Development):—

(1) G.S.R. No. 889(E), dated the 30th December, 1994, publishing the Petroleum (Amendment) Rules, 1994, under sub-section (4) of section 29 of the Petroleum Act, 1934,

(Placed in Library. *See* No. LT-7585/95)

(2) SO. No. 280(E)/18A/IDRA/95, dated the 31st March, 1995, regarding extension of the period of take over of 'Authorised Controller', under Section 18A(2) of the Industries (Development and Regulation) Act, 1951.

(3) S.O. No. 2S1(E)/18AA/IDRA/95, dated the 31st March, 1953,